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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,376	10/07/2003	Paul Marinier	I-2-0411.1US	4627

24374 7590 06/06/2006

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EXAMINER	
KARIKARI, KWASI	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 10/680,376	**Applicant(s)** MARINIER ET AL.
	Examiner Kwasi Karikari	**Art Unit** 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 March 2006_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _10-21_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _10-21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Arguments

2. Applicant's arguments with respect to claims 10-21 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 1-9 have been cancelled and claims 10-21 have been added.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10-21 are rejected under U.S.C. 102(e) as being anticipated by Hedlund et al., (U.S 6,934,268), (hereinafter Hedlund).

Regarding **claim 10**, Hedlund discloses a method of simulating the performance (admission and congestion control, **see** col. 4, lines 4-19) of a communication system (**see** Fig. 1) which provides a plurality of timeslots for supporting transmissions that are received and transmitted by a plurality of users (user equipments 13a-d, **see** Fig. 1), the method comprising:

(a) selecting a new candidate user for consideration of admission to the system (admission measures to admit a new user equipment is taken if the downlink power is not limited, **see** col. 4, line 50- col. 5, line 7);

(b) computing an interference level of the new candidate user in each of the timeslots (the number of use equipments are related to TPC- commands and interference, **see** col. 5, lines 8-50 and col. 6, lines 34-54)

(c) invoking a first algorithm to determine whether the new candidate user should be admitted in the system based upon the computed interference levels (decision to admit a user is taken when downlink power is not limited, and base station can accepted at least one additional use equipment, **see** col. 4, line 50- col. 5, line 7 and col. 5, lines 8-50 and col. 6, lines 34-54; whereby interference is related to number of user's TPC- commands);

(d) if the first algorithm determines in step (c) that the new candidate user should be admitted in the system (**see** col. 5, lines 1-7):

(d1) allocating at least one timeslot to the new candidate user (base station accepts one additional user equipment if downlink power is not limited, **see** col. 5, lines 1-50; whereby downlink power is related to time slot (k+1) and acceptance of a user equipment is associated with "allocation");

(d2) computing a transmission power level for the new candidate user based on the computed interference level in the at least one allocated timeslot (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29-col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with "computing a transmission power level".); and

(d3) performing a power balancing process to update the transmission power levels of all users admitted in the system (analyzing total allocated power in the network and congestion measure are taken, **see** col. 8, lines 21-56; and adjustment of downlink power, **see** col. 5, lines 36-50); and

(e) determining whether there are any additional new candidate users to consider for admission to system (**see** col. 5, lines 1-7 and col. 6, lines 2-11) and, if so, repeating steps (a)-(d) (**see** col. 9, lines 19-41).

Regarding **claim 11,** as recited in claim 10, Hedlund discloses that the method of further comprising:

(f) invoking a second algorithm using the interference levels of all of the users admitted to the system (decision to admit a user is taken when downlink power is not limited, and base station can accepted at least one additional use equipment, **see** col. 4, line 50- col. 5, line 7 and col. 5, lines 8-50 and col. 6, lines 34-54; and selection criteria as related to interference in congestion and admission control method, **see** col. 5, line 36- col. 6, line 53); and

(g) determining whether the timeslot allocation of any user admitted to the system should be modified (a particular user equipment sends TCP –command the indicates a request for increase or decrease of power; see col. 5, lines 8-50; whereby increase or decrease of power is associated with "modification of allocated timeslot") and, if so, computing the transmission power levels of users affected by the modified timeslot allocation (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29- col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with "computing a transmission power levels").

Regarding **claim 12,** as recited in claim 10, Hedlund discloses the method, wherein the power balancing process of step (d3) further comprises:

(i) computing an interference level for each user admitted to the system (**see** col. 6, lines 27-53);

(ii) dropping each one of the admitted users having an interference level that exceeds an established interference level threshold (selecting a number of user equipments and releasing of connection to the base station if congestion exceeds the second threshold, **see** col. 9, lines 4-18); and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics (**see** col. 9, lines 4-41 and col. 7, line 61- col. 8, line 7; i.e., releasing/admission records of user equipments is required in other to resolve congestion, admission measures and system performance).

Regarding **claim 13,** as recited in claim 10, Hedlund discloses the method, wherein the power balancing process of step (d3) further comprises:

(i) computing a transmission power level for each user admitted to the system (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29- col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with “computing a transmission power level”);

(ii) dropping each one of the admitted users having a transmission power level that does not meet an established minimum transmission power level threshold (selecting a number of user equipments and releasing of connection to the base station if congestion exceeds the second threshold, **see** col. 9, lines 4-18); and

(iii) recording each occurrence of dropping and admitted user as a "drop" event for the purpose of collecting statistics (**see** col. 9, lines 4-41 and col. 7, line 61- col. 8, line 7; i.e., releasing/admission records of user equipments is required in other to resolve congestion, admission measures and system performance).

Regarding **claim 14,** as recited in claim 10, Hedlund discloses the method, wherein if the first algorithm determines in step (c) that the new candidate user should not be admitted in the system, recording a "block" event indicating that the new candidate user should be blocked from connecting to the system and proceeding to step (e) (**see** col. 9, lines 4-41, whereby releasing of connection is associated with "blocking").

Regarding **claim 15,** as recited in claim 10, Hedlund discloses the method, wherein each admitted user has a respective quality requirement, the method further comprising:

(f) determining whether each user meets their respective quality requirement (admission control is base on operator-defined selection criterion which include type of service and quality of channels to various user equipments and **see** col. 5, line 36- col. 7, line 3).

Regarding **claim 16**, Hedlund discloses a method of simulating the performance of a communication system which provides a plurality of timeslots for supporting transmissions that are received and transmitted by a plurality of users, the method comprising:

(a) selecting a new candidate user for consideration of admission to the system, wherein the system is already being used by a plurality of admitted users (admission measures to admit a new user equipment is taken if the downlink power is not limited, **see** col. 4, line 50- col. 5, line 7);

(b) computing an interference level of the new candidate user in each of the timeslots based on transmission power levels of the admitted users (the number of use equipments are related to TPC- commands and interference, **see** col. 5, lines 8-50 and col. 6, lines 34-54);

(c) invoking a first algorithm to determine whether the new candidate user should be admitted in the system based upon the computed interference levels and the transmission power levels of the admitted users (decision to admit a user is taken when downlink power is not limited, and base station can accepted at least one additional use equipment, **see** col. 4, line 50- col. 5, line 7 and col. 5, lines 8-50 and col. 6, lines 34-54; whereby interference is related to number of user's TPC- commands);

(d) if the first algorithm determines in step (c) that the new candidate user should be admitted in the system (**see** col. 5, lines 1-7:

(d1) allocating at least one timeslot to the new candidate user (base station accepts one additional user equipment if downlink power is not limited, **see** col. 5, lines

1-50; whereby downlink power is related to time slot (k+1) and acceptance of a user equipment is associated with "allocation");

(d2) computing a transmission power level for the new candidate user based on the computed interference levels in the at least one allocated timeslot (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29- col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with "computing a transmission power level");

(d3) performing a power balancing process to update the transmission power levels of all users admitted in the system (analyzing total allocated power in the network and congestion measure are taken, **see** col. 8, lines 21-56; and adjustment of downlink power, **see** col. 5, lines 36-50); and

(e) determining whether there are any additional new candidate users to consider for admission to system (**see** col. 5, lines 1-7 and col. 6, lines 2-11) and, if so, repeating steps (a)-(d) (**see** col. 9, lines 19-41).

Regarding **claim 17,** as recited in claim 16, Hedlund discloses that the method of further comprising:

(f) invoking a second algorithm using the transmission power levels of all of the users admitted to the system (decision to admit a user is taken when downlink power is not limited, and base station can accepted at least one additional use equipment, **see** col. 4, line 50- col. 5, line 7 and col. 5, lines 8-50 and col. 6, lines 34-54; and selection criteria as related to interference in congestion and admission control method, **see** col. 5, line 36- col. 6, line 53); and

(g) determining whether the timeslot allocation of any user admitted to the system should be modified (a particular user equipment sends TCP –command the indicates a request for increase or decrease of power; see col. 5, lines 8-50; whereby increase or decrease of power is associated with "modification of allocated timeslot"); and, if so, computing the transmission power levels of users affected by the modified timeslot allocation (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29- col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with "computing a transmission power levels").

Regarding **claim 18,** as recited in claim 16, Hedlund discloses the method, wherein the power balancing process of step (d3) further comprises:

(i) computing an interference level for each user admitted to the system (**see** col. 6, lines 27-53);

(ii) dropping each one of the admitted users having an interference level that exceeds an established interference level threshold (selecting a number of user equipments and releasing of connection to the base station if congestion exceeds the second threshold, **see** col. 9, lines 4-18); and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics (**see** col. 9, lines 4-41 and col. 7, line 61-col. 8, line 7; i.e., releasing/admission records of user equipments is required in other to resolve congestion, admission measures and system performance).

Regarding **claim 19,** as recited in claim 16, Hedlund discloses the method, wherein the power balancing process of step (d3) further comprises:

(i) computing a transmission power level for each user admitted to the system (accumulated TCP-command are use to estimate the required total downlink power; and user equipment can be assigned the requested power level as long as the estimated total allocated downlink power remain below maximum permitted level, **see** col. 4, line 29- col. 5, line 50 and col. 6, lines 28-53; whereby the decrease and increase of power and the estimated total allocated downlink power are associated with "computing a transmission power level");

(ii) dropping each one of the admitted users having a transmission power level that does not meet an established minimum transmission power level threshold (selecting a number of user equipments and releasing of connection to the base station if congestion exceeds the second threshold, **see** col. 9, lines 4-18); and

(iii) recording each occurrence of dropping and admitted user as a "drop" event for the purpose of collecting statistics (**see** col. 9, lines 4-41 and col. 7, line 61- col. 8, line 7; i.e., releasing/admission records of user equipments is required in other to resolve congestion, admission measures and system performance).

Regarding **claim 20,** as recited in claim 16, Hedlund discloses the method, wherein if the first algorithm determines in step (c) that the new candidate user should not be admitted in the system, recording a "block" event indicating that the new candidate user should be blocked from connecting to the system and proceeding to step (e) (**see** col. 9, lines 4-41, whereby releasing of connection is associated with "blocking").

Regarding **claim 21,** as recited in claim 16, Hedlund discloses the method, wherein each admitted user has a respective quality requirement, the method further comprising:

(f) determining whether each user meets their respective quality requirement (admission control is base on operator-defined selection criterion which include type of service and quality of channels to various user equipments and **see** col. 5, line 36- col. 7, line 3).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Furuskar et al. (U.S. 20020102984 A1) teaches a method and apparatus for controlling quality of service for multiple services through power setting.

Mitra (U.S. 5,551,057) teaches cellular mobile radio system power control.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-F (8 am - 4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kwasi Karikari
Patent Examiner.

Temica M. Beamer
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PRIMARY EXAMINER
5/30/04